

Curriculum Vitae

PERSONAL DATA

FULL NAME: Viet Quoc Pham
BIRTH: April 05th 1990 | Hai Duong, Vietnam
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PROFILES: Google Scholar, ResearchGate, Web of Science, Scopus, LinkedIn, and ORCID

OVERVIEW

I am an Assistant Professor in Networks and Distributed Systems at the School of Computer Science and Statistics, Trinity College Dublin, Ireland. I am also associated with CONNECT, an SFI centre for future networks and communications, and AdvanceCRT, an SFI centre for research training in advanced networks for sustainable societies, where I lead the COmputing, Intelligence, and Networking (COIN) research group. My research interest is to employ an arsenal of mathematical tools, such as convex optimization, game theory, and machine learning to design, analyze, and optimize complex networks and applications, such as edge computing, 6G networks, metaverse, blockchain, and wireless AI. While my work addresses research aspects of the interplay between AI and wireless, I am also interested in multidisciplinary research to leverage expertise from different sciences and disciplines.

EDUCATION

AUG. 2017 Doctor of Engineering in TELECOMMUNICATIONS, **Inje University**, Korea
Thesis: "Fair and Energy-Efficient Resource Allocation Optimization in Wireless Networks"
Prize: **Best Ph.D. Dissertation Award**, Ranking #1 in Engineering

AUG. 2015 MSc in TELECOMMUNICATIONS, **Inje University**, Korea
Thesis: "Multi-Timescale Cross-Layer Design in Wireless Multihop Networks"

AUG. 2013 BEng in ELECTRONICS AND TELECOMMUNICATIONS
Hanoi University of Science and Technology, Vietnam
Thesis: "Building an Observational Data Processing and Archiving Center for Automatic Water Level Gathering and Alarming System" (in Vietnamese)

ACADEMIC EXPERIENCE

JAN. 2023 - CURRENT **Assistant Professor** in Networks and Distributed Systems,
School of Computer Science and Statistics, Trinity College Dublin,
The University of Dublin, Republic of Ireland

JAN. 2023 - CURRENT **TCD Supervisor**,
SFI Centre for Research Training in Advanced Networks for Sustainable Societies,
ADVANCE CRT, Republic of Ireland

JAN. 2023 - CURRENT **Associate Investigator**,
SFI Research Centre for Future Networks and Communications,
CONNECT, Republic of Ireland

JAN. 2020 - JAN. 2023 **Research Professor**,
Korean Southeast Center for the 4th Industrial Revolution Leader Education,
Pusan National University, Republic of Korea

MAR. 2018 - DEC. 2019 **Research Professor**,
ICT Convergence Research Center, Changwon National University/Inje University,
Republic of Korea

- SEP. 2017 - FEB. 2018 **Post-Doctoral Research Fellow**,
Department of Computer Science and Engineering, Kyung Hee University,
Republic of Korea
- SEP. 2013 - JUN. 2017 **Research Assistant** (PhD Student),
Department of Information and Communication System, Inje University,
Republic of Korea
- FEB. 2012 - AUG. 2013 **Research Assistant** (Senior Student), School of Electronics and Telecommunications,
Hanoi University of Science and Technology, Vietnam

ADMINISTRATIVE EXPERIENCE

- AUG. 2023 - PRESENT **Demonstrator and Teaching Assistant Director**,
School of Computer Science and Statistics, Trinity College Dublin
- SEP. 2020 - PRESENT **Administrator** of telecom-vn, 127.0.0.1 of Vietnamese Telecommian Community.

VISITING EXPERIENCE

- JUN. 2023 - JUL. 2023 University of Ulsan, Korea, Prof. Sunghwan Kim
- JAN. 2016 - FEB. 2016 Tokyo University of Science, Japan, Prof. Mikio Hasegawa
- AUG. 2019 - AUG. 2019 Tokyo University of Science, Japan, Prof. Mikio Hasegawa

GRANTS AND PROJECTS

- 2023 - 2025 **Enterprise Ireland's ERC Funding Support** (€15,982, 2 years)
Principal Investigator, Project EC20231518
Title: *Generalized Knowledge Abstraction for Data Reconstruction and Lifelong Learning*
- 2019 - 2024 **Korea NRF Basic Science and Research** (500,000,000 KRW, 5 years)
Principal Investigator (sole PI), Grant NRF-2019R1C1C1006143
Title: *Privacy Enhancing Connected Cars in 5G and Beyond*
- 2022 - 2024 **FDCRGP Grant, Nazarbayev University** (\$136,000, 3 years)
Co-Principal Investigator, Grant No. 11022021FD2925
Title: *Edge-assisted Activity Recognition using Skeletal Representation and DL for Video Surveillance*
- 2019 - 2024 **Korea NRF Basic Science and Research** (500,000,000 KRW, 5 years)
Key Participant, Grant NRF-2019R1I1A3A01060518
Title: *Edge Computing in the 5G Ecosystem: Joint 4C Framework and Its Applications*
- 2018 - 2019 **Korea NRF Basic Science and Research** (25,000,000 KRW), Key Participant
Project in collaboration with The University of Sydney, Grant NRF-2018K2A9A1A01090540
Title: *Low Overhead Channel Access for 5G Mobile Communications in Large-Scale IoT Networks*
- 2020 - 2027 **Brain Korea (BK) 21** (549,825,000 KRW/year), Participant, Pusan National University,
Korean Southeast Center for the 4th Industrial Revolution Leader Education

AWARDS AND RECOGNITION

- Coordination Support Award, Enterprise Ireland, 2023-2025.
- TCD School of Computer Science and Statistics Award, 2023-2027.
- Decade of Contribution Award, Wireless AI (WAI) Laboratory, Pusan National University, 2023.
- Best Paper Award, IEEE ATC Conference, 2022.
- Award for Outstanding Contributions and Research Excellence, Minister of Education (Korea), 2021.
- Golden Globe Award 2021 for young Scientists, Ministry of Science and Technology (Vietnam), 2021.

- World's Top 2% of Scientists on Stanford University List, 2021-2022.
- Top Reviewer Award, IEEE Transactions on Vehicular Technology, 2020.
- Best Ph.D. Dissertation Award (ranking #1), Inje University, 2017.
- Leadership and Scientific Publication Scholarship, Inje University, 2015-2016.
- Best Paper Award, KMMS 2014, JKCCS 2016, KJCCS 2020, KICS 2021.
- Prize for Excellent Students, Vietnamese Students' Association in Korea (VSAK), 2015.
- University Scholarship for Excellent students, HUST, 2010-2013.

MENTORING AND TEACHING EXPERIENCE

Lecturer, Trinity College Dublin, 2022-2024

1. **Microprocessor Systems - CSU23021-202223**, Hilary Term, undergraduate course: *This module provides a holistic overview of how a typical general purpose computing system functions, followed by a deep-dive into the various key architectural features of such systems.*

Assistant Lecturer, Pusan National University, 2021

1. **AI for NextG networks** (Winter 2021, graduate course): *The students learn how to apply different AI techniques (e.g., machine, deep, federated, and reinforcement learning) for NextG networks, and how NextG wireless can help to improve the performance of AI and deployment of AI services.*

Adjunct Lecturer, Inje University, 2018 - 2019

1. **Convex optimization** (Fall 2018, graduate course): *This course focuses on the fundamentals of convex functions and problem formulation and optimization. Further, this course is also a prerequisite for advanced courses, such as game theory, artificial intelligence, and machine learning.*
2. **Game theory in wireless and communication networks** (Spring 2019, graduate course): *This course equips the students with promising mathematical tools (e.g., cooperative games, coalitional games, and Stackelberg games) to solve problems in wireless and communication networks from the economics perspectives.*
3. **Machine learning in wireless and communication networks** (Fall 2019, graduate course): *This course delivers the fundamental concepts of machine learning (supervised and unsupervised learning) and its applications to future wireless networks and Internet-of-Things systems.*

Teaching Assistant, Inje University, 2016 - 2017

1. Introduction to Android Programming (Fall 2016, undergraduate course): *Responsible for preparation of teaching materials, assignments, term projects, and labs.*
2. Data and Computer Communications (Fall 2016, Spring 2017, Fall 2017, undergraduate course): *Responsible for preparation of teaching materials, term projects, and labs.*

Mentoring Assistant, Hanoi University of Science and Technology, 2012

1. Project II (Fall 2012, undergraduate course): *Worked as a senior student and guided 4th-year undergraduate students on programming skills and testbed designs.*

FIELDS OF RESEARCH INTEREST

- **COmputing**: cloud edge computing, aerial computing, edge of things, and edge AI.
- **Intelligence**: wireless AI, deep learning, deep reinforcement learning, and federated learning.
- **Networking**: 6G wireless, IoT, intelligent surfaces, metaverse, and blockchain.

SUPERVISION

Current Students

1. **Linh Thanh Nguyen**

- PhD Student, Trinity College Dublin, 2023/09 – Present.
- Topic: Blockchain-based intelligent security and privacy preservation for IoT data marketplace.

2. **Tuan Van Tran**

- PhD Student, Trinity College Dublin, 2023/09 – Present.
- Topic: Adaptive framework for scaling federated learning (FL) in IoT systems.

3. **Mengyan Huang**

- PhD Student, Xidian University, 2021/09 – Present.
- Visiting PhD Student, Trinity College Dublin, 2023/10 – 2024/10.
- Major in beamforming/precoding, physical layer security, satellite communications, and NOMA.

4. **Hoc Thai Vu**

- PhD Student, University of Ulsan, 2020/03 – Present.
- Topic: Performance analysis and data-driven optimization of 6G short-packet communications.

5. **Mai Thi Le**

- PhD Student, Pusan National University, 2021/03 – Present.
- Visiting PhD Student, Trinity College Dublin, 2023/05 – Present.
- Topic: AI-enabled Resource Allocation in Intelligent Wireless Networks.

6. **Duong Minh Nguyen**

- PhD Student, Pusan National University, 2020/09 – Present.
- Topic: DRL and communication-efficient FL for very large-scale IoT systems.

7. **Swe Swe Latt**

- PhD Student, Pusan National University, 2020/09 – Present.
- Topic: Resource allocation optimization for federated learning in future 6G wireless networks.

8. **Thanh Thien Dao**

- PhD Student, Pusan National University, 2020/09 – Present.
- Topic: Deep learning and depth map for UAV and robotic applications.

9. **Daeil Noh**

- PhD Student, Pusan National University, 2020/09 – Present.
- Topic: Deep learning for UAV recognition.

10. **Sang Min Lee**

- PhD Student, Pusan National University, 2020/09 – Present.
- Topic: Communication-efficient federated learning for massive IoT in future wireless networks.

Alumnus

1. **Nadia Iradukunda** [Ph.D., Inje University, 2019/09-2022/08]. Topic: Resource allocation optimization for UAV wireless backhaul 5G networks. Current position: Lecturer, Mount Kenya University, Rwanda.
2. **Mai Thi Le** [MSc, Inje University, 2019/3-2021/2]. Topic: Swarm intelligence for D2D communications. Current position: PhD student, Pusan National University, Korea.
3. **Hoang Huu Trung** [Ph.D., Inje University, 2018/9-2021/2]. Topic: ML for mmWave communications. Current position: Lecturer, Hue University, Vietnam.
4. **Vo Ta Hoang** [Ph.D., Inje University, 2017/9-2020/2]. Topic: Resource allocation for MEC systems. Current position: Lecturer, Thuyloi University, Vietnam.
5. **Nguyen Tien Hoang** [MSc, Inje University, 2017/9-2019/8]. Topic: Coalitional games for NOMA-MEC. Current position: QA Project Leader, LG Innotek, Vietnam.
6. **Maurice Nduwayezu** [MSc, Inje University, 2017/9-2019/8]. Topic: DRL for NOMA-MEC offloading. Current position: PhD student, Seoul National University of Science and Technology (SeoulTech), Korea.
7. **Girmay Gebremariam** [MSc, Inje University, 2017/9-2019/8]. Topic: Swarm intelligence for D2D communications with unlicensed spectrum.
8. **Akmal Azizan** [MSc, Inje University, 2017/9-2019/8]. Topic: Blockchain for healthcare applications.

PROFESSIONAL ACTIVITIES

Membership

- Senior Member of the IEEE, 2023 – Present.
- Member of the IEEE Communication Society (ComSoc), 2022 – Present.
- IEEE CTSoc Wireless and Network Technologies (WNT) Technical Committee, 2022 - Present.
- Member of the IEEE, 2018 – 2023.

Editor

- [IEEE Communications Letters](#), 2023 – Present.
- [Nature Scientific Reports](#), 2022 – Present.
- [Journal of Network and Computer Applications](#), 2020 – Present.
- [Frontiers in Communications and Networks](#) [Associate Editor, 2020 – Present]

Guest Editor

- [IEEE Internet of Things Magazine](#), Special Issue on Federated Learning for Industrial Internet of Things, 2023 – Present.
- [IEEE Transactions on Consumer Electronics](#), Federated Learning for Personalized Recommendation of Consumer Electronics, 2023 – Present.
- [Computer Communications](#), Special Issue on Intelligent Device-free Sensing for Future Internet of Things: Emerging Trends and Challenges, 2023 – Present.
- [IEEE Internet of Things Journal](#), Lead Editor, Special Issue on Aerial Computing for the Internet of Things (IoT), 2021 – 2022.
- [Sensors](#), Special Issue on Security and Privacy in the Internet of Things (IoT), 2021 – 2022.

Invited Referee for Journals

- **Senior Reviewer:** IEEE Open Journal of the Communications Society.
- **IEEE Letters:** IEEE Communications Letters, IEEE Wireless Communications Letters, IEEE Networking Letters.
- **IEEE Transactions/Journals:** IEEE Communications Surveys and Tutorials, IEEE Transactions on Communications, IEEE Transactions on Wireless Communications, IEEE Transactions on Vehicular Technology, IEEE Transactions on Mobile Computing, IEEE Transactions on Cloud Computing, IEEE Transactions on Signal Processing, IEEE Transactions on Services Computing, IEEE Transactions on Parallel and Distributed Systems, IEEE Transactions on Computational Social Systems, IEEE Transactions on Green Communications and Networking, IEEE Transactions on Cognitive Communications and Networking, IEEE Transactions on Signal and Information Processing over Networks, IEEE Transactions on Industrial Informatics, IEEE Transactions on Network Science and Engineering, IEEE Internet of Things Journal, IEEE Journal on Selected Areas in Communications, IEEE Journal of Selected Topics in Signal Processing, IEEE Open Journal of the Communications Society, Proceedings of the IEEE.
- **IEEE Magazines:** IEEE Communications Magazine, IEEE Wireless Communications, IEEE Control Systems Magazine, IEEE Vehicular Technology Magazine, IEEE Computational Intelligence Magazine, IEEE Consumer Electronics Magazine, IEEE Communications Standards Magazine, IEEE Internet Computing.
- **Other Journals:** ACM Computing Surveys, IEEE Systems Journal, IEEE Access, Computer Networks, Transactions on Emerging Telecommunications Technologies, EURASIP Journal on Wireless Communications and Networking, International Journal of Distributed Sensor Networks, Sensors.

Technical Program Committee

- **2024:** IEEE International Conference on Communications (ICC).
- **2023:** IEEE International Conference on Communications (ICC), IEEE Wireless Communications and Networking Conference (WCNC), IEEE VTC2023-Fall.
- **2022:** IEEE International Conference on Communications (ICC), IEEE Wireless Communications and Networking Conference (WCNC).
- **2021:** IEEE 94th Vehicular Technology Conference (VTC2021-Fall), IEEE International Smart Cities Conference (ISC2), EAI International Conference on Heterogeneous Networking for Quality, Reliability, Security and Robustness (EAI Qshine), IEEE Global Communications Conference (GLOBECOM).
- **2020:** ICCIS, IEEE Wireless Communications and Networking Conference (WCNC), IEEE International Conference on Communications (ICC), IEEE 91st Vehicular Technology Conference (VTC2020-Spring), IEEE Workshop on Security Trust Privacy in Emerging Cyber-Physical Systems (STP-CPS).

TPC Chair/Co-Chair/Track Chair

- **2023:** 12th International Symposium on Information and Communication Technology (SoICT 2023), IEEE GLOBECOM 2023 "Edge Learning over Next-Generation Networks" Workshop.
- **2022:** 11th EAI International Conference on Game Theory for Networks (EAI GameNets 2022), ICIT 2022, 11th International Symposium on Information and Communication Technology (SoICT 2022), IEEE International Conference on Advanced Technologies for Communications (ATC).

Publicity Chair/Co-Chair

- **2023:** International Conference on Wireless Communications and Signal Processing (WCSP 2023).

Invited Book Reviewer

- Wiley, Springer, IEEE.

Proposal Evaluator

- Korea NRF, Vietnam NAFOSTED, Programme SASPRO 2.

Thesis Evaluator/Reader

- School of Computer Science and Statistics, Trinity College Dublin, 2023.
- School of Information and Communication Technology, Hanoi University of Science and Technology, 2023.
- National University of Sciences and Technology (NUST), Pakistan, 2023.

Advisor for Scholarship and Fellowship Applications

- Korean Government Scholarship Program
- Korea Research Foundation Postdoctoral Fellowship for Foreigners
- Individual Professor Scholarships in Korea and Japan

Invited Talk

- Invited Talk, "Edge Computing: From Computing at the Edge to Edge Intelligence," University of Ulsan, Korea, July 11th 2023.
- Invited Talk, "6G Frontiers: Towards Future Wireless Systems," University of Ulsan, Korea, June 29th 2023.
- Invited Talk, "Wirelessly Powered Federated Learning Networks: Joint Power Transfer, Data Sensing, Model Training, and Resource Allocation," Pusan National University, Korea, June 23rd 2023.
- Invited Talk, "Communication-Efficient Federated Learning over Massive Internet-of-Things," University of Ulsan, Korea, June 22nd 2023.
- Online Invited Talk, "Communication-Efficient Federated Learning over Massive Internet-of-Things," Le Quy Don University, Vietnam, May 19th 2023.
- Keynote (with Prof. Won-Joo Hwang), "Multi-Access Edge Computing in 5G Networks and Beyond," Smart-Com 2018, Bangkok, Thailand, October 31st 2023.

PUBLICATIONS

Books

- [1] C. de Alwis, **Q.-V. Pham**, and M. Liyanage, *6G Frontiers: Towards Future Wireless Systems*, Wiley-IEEE Press, Oct. 2022.

Book Chapters

- [1] P. Hegde, R. Chengoden, N. Victor, T. Huynh-The, S. Bhattacharya, P. K. R. Maddikunta, T. R. Gadekallu, **Q.-V. Pham**, "Blockchain for the Metaverse: State-of-the-Art and Applications," in *Metaverse Communication and Computing Networks: Applications, Technologies, and Approaches*, Wiley-IEEE Press, 2023.

- [2] T. Huynh-The, **Q.-V. Pham**, X.-Q. Pham, T. Do-Duy, and T. R. Gadekallu, "AI and Computer Vision Technologies for Metaverse," in *Metaverse Communication and Computing Networks: Applications, Technologies, and Approaches*, Wiley-IEEE Press, 2023.
- [3] **Q.-V. Pham**, T. Huynh-The, M. Zeng, Z. Yang, Z. Ding, and W.-J. Hwang, "The Emergence of Aerial Computing: Applications and Challenges," in *6G Wireless: The Communication Paradigm Beyond 2030*, CRC Press, 2022.
- [4] M. Zeng, E. Bedeer, X. Li, **Q.-V. Pham**, O. A. Dobre, P. Fortier, and L. A. Rusch, "IRS-Empowered Wireless Communications: State-of-the-Art, Key Techniques, and Open Issues," in *6G Wireless: The Communication Paradigm Beyond 2030*, CRC Press, 2022.
- [5] **Q.-V. Pham**, Z. Yang, C. Huang, Q. Yang, T. Guo, Y. Xu, and Z. Zhang, "Machine Learning for UAV Communication-Assisted Computing Networks," in *Secure and Digitalized Future Mobility: Shaping the Ground and Air Vehicles Cooperation*, CRC Press, 2022.
- [6] **Q.-V. Pham**, D. C. Nguyen, T. Huynh-The, W.-J. Hwang, and P. N. Pathirana, "Artificial intelligence and big data for COVID-19 and social distancing," in *Enabling Technologies for Social Distancing: Fundamentals, concepts and solutions*, IET Digital Library, 2022.
- [7] D. C. Nguyen, **Q.-V. Pham**, M. Ding, P. N. Pathirana, and A. Seneviratne, "Security, privacy and blockchain applications in COVID-19 detection and social distancing," in *Enabling Technologies for Social Distancing: Fundamentals, concepts and solutions*, IET Digital Library, 2022.
- [8] N.-N. Dao, N.-T. Dinh, **Q.-V. Pham**, T. V. Phan, S. Cho, and T. Braun, "Vulnerabilities in fog/edge computing from architectural perspectives," in *Fog/Edge Computing for Security, Privacy, and Applications*, Springer, 2021.

Preprints, Under Review

- [1] M. Alishahi, P. Fortier, M. Zeng, **Q.-V. Pham**, and X. Li, "Energy Minimization for IRS-aided Wireless Powered Federated Learning Networks with NOMA," under review, *IEEE Transactions on Vehicular Technology*, 2023.
- [2] T.-H. Vu, D. B. da Costa, S. Kim, and **Q.-V. Pham**, "Downlink Multiuser RSMA Networks: A General Analytical Framework for the Error Rate Performance," under review, *IEEE Transactions on Wireless Communications*.
- [3] M.-D. Nguyen, Q.-V. Do, Z. Yang, W.-J. Hwang, and **Q.-V. Pham**, "A Joint Communication and Computation Framework for Goal-Oriented Semantic Communication with Distortion Rate Resilience," submitted, *IEEE International Conference on Machine Learning for Communication and Networking (ICMLCN)*, Stockholm, Sweden, 2024.
- [4] M.-D. Nguyen, Q.-V. Do, Z. Yang, W.-J. Hwang, and **Q.-V. Pham**, "Joint Communication and Computation Framework for Goal-Oriented Semantic Communication with Distortion Rate Resilience," under review, *IEEE Transactions on Mobile Computing*, 2023.
- [5] K. Do, M.-D. Nguyen, T. H. Nguyen, L. Tran-Thanh, and **Q.-V. Pham**, "Revisiting LARS for Large Batch Training Generalization of Neural Networks," submitted, *International Conference on Learning Representations (ICLR)*, Vienna Austria, 2024.
- [6] O. Aouedi, T.-H. Vu, A. Alessio, D. C. Nguyen, and K. Piamrat, G. Marchetto, and **Q.-V. Pham**, "A Survey on Intelligent Internet of Things: Applications, Security, Privacy, and Future Directions," under review, *IEEE Communications Surveys and Tutorial*, 2023.
- [7] T.-H. Vu, M. Zeng, S. Kim, H. V. Poor, and **Q.-V. Pham**, "Short-Packet Communications: State-of-the-art and Recent Advances," under review, *IEEE Wireless Communications*, 2023.
- [8] T.-T. Dao, D.-I. Noh, M. Hasegawa, H. Sekiya, W.-J. Hwang, and **Q.-V. Pham**, "VT-MCNet: High-Accuracy Automatic Modulation Classification Model based on Vision Transformer," under review, *IEEE Communications Letters*, 2023.
- [9] P. Boopathy, N. Deepa, N. Victor, T. R. Gadekallu, P. K. R. Maddikunta, G. Yenduri, W. Wang, **Q.-V. Pham**, T. Huynh-The, and M. Liyanage, "Metaverse for Industry 5.0 in NextG Communications: Potential Applications and Future Challenges," under review, *Transactions on Consumer Electronics*, 2023.

- [10] N.-M. Luu, M.-D. Nguyen, E. B. Mohamed, V.-D. Nguyen, H. T. Dinh, D. N. Nguyen, and **Q.-V. Pham**, "Sample-Driven Federated Learning for Energy-Efficient and Real-Time IoT Sensing," under review, *IEEE Transactions on Wireless Communications*, 2023.
- [11] T. Huynh-The, N. C. Luong, H. Phan, D. B. da Costa, and **Q.-V. Pham**, "Improved Waveform Classification for Integrated Radar-Communication 6G Systems via Convolutional Neural Networks," under review, *IEEE Transactions on Vehicular Technology*, 2023.
- [12] M. Le, T. Huynh-The, T. Do-Duy, T.-H. Vu, and W.-J. Hwang, and **Q.-V. Pham**, "Applications of Distributed Machine Learning for the Internet-of-Things: A Comprehensive Survey," under review, *IEEE Communications Surveys and Tutorials*.
- [13] M. Le, Q. V. Do, Z. Han, W.-J. Hwang, and **Q.-V. Pham**, "Resource Allocation in THz-NOMA-enabled HAP Systems Based on Deep Reinforcement Learning," under review, *IEEE Wireless Communications Letters*.
- [14] N. C. Luong, T. Huynh-The, V. D. Nguyen, D. W. K. Ng, S. Chatzinotas, D. Niyato, and **Q.-V. Pham**, "Edge Computing for Semantic Communication Enabled Metaverse: An Incentive Mechanism Design," under review, *IEEE Network*.
- [15] Y. Ding, Z. Yang, **Q.-V. Pham**, Z. Zhang, and M. Shikh-Bahaei, "Distributed Machine Learning for UAV Swarms: Computing, Sensing, and Semantics," under review, *IEEE Internet of Things Journal*.
- [16] M.-D. Nguyen, **Q.-V. Pham**, H. T. Dinh, L. Tran-Thanh, D. N. Nguyen, and W.-J. Hwang, "Label-driven Federated Learning," under review, *IEEE Transactions on Neural Networks and Learning Systems*, 2023.
- [17] T.-H. Vu, **Q.-V. Pham**, T.-T. Nguyen, D. B. da Costa, and S. Kim, "Enhancing RIS-Aided Two-Way Full-Duplex Communication with Non-Orthogonal Multiple Access," under review, *IEEE Transactions on Vehicular Technology*.
- [18] L. N. T. Huynh, M. D. Hossain, **Q.-V. Pham**, Y. K. Tun, and E.-N. Huh, "A Block-structured Optimization Approach for Data Sensing and Computing in Vehicle-assisted Edge Computing Networks," under review, *IEEE Sensors Journal*.
- [19] Q. V. Do, **Q.-V. Pham**, and W.-J. Hwang, "QoE-Driven Task Association and Resource Allocation in Aerial-Access Edge Computing Using Deep Reinforcement Learning," under revision, *IEEE Transactions on Cognitive Communications and Networking*.
- [20] T. R. Gadekallu, **Q.-V. Pham**, T. Huynh-The, S. Bhattacharya, P. K. R. Maddikunta, and M. Liyanage, "Federated Learning for Big Data: A Survey on Opportunities, Applications, and Future Directions," under revision, *Engineering Applications of Artificial Intelligence*.
- [21] B. Prabadevi, M. Liyanage, N. Deepa, Mounik VVSS, S. Reddy, P. K. R. Maddikunta, N. Khare, T. R. Gadekallu, W.-J. Hwang, and **Q.-V. Pham**, "Deep Learning for Intelligent Demand Response and Smart Grids: A Comprehensive Survey," under revision, *Computer Science Review*.
- [22] M. Alazab, R. Vinayakumar, S. Srinivasan, **Q.-V. Pham**, S. Venkatraman, Soman KP, and K. Simran, "Deep Learning for Cyber Security Applications: A Comprehensive Survey," 10.36227/TechRxiv.16748161.
- [23] X.-T. Nguyen, M.-D. Nguyen, **Q.-V. Pham**, V.-Q. Do, and W.-J. Hwang, "Resource Allocation for Compression-aided Federated Learning with High Distortion Rate," 10.48550/arXiv.2206.06976.
- [24] **Q.-V. Pham**, N.-N. Dao, T. Huynh-The, J. Zhao, and W.-J. Hwang, "Clustering and Power Allocation for UAV-assisted NOMA-VLC Systems: A Swarm Intelligence Approach," 10.48550/arXiv.2007.15430.

Journal Articles

- [1] T.-H. Vu, **Q.-V. Pham**, and S. Kim, "THz-based Rate-Splitting Multiple-Access (RSMA): Is It Always Better Than NOMA?," *IEEE Transactions on Vehicular Technology*, early access.
- [2] M. Le, H. T. Dinh, D. N. Nguyen, W.-J. Hwang, and **Q.-V. Pham**, "Wirelessly Powered Federated Learning Networks: Joint Power Transfer, Data Sensing, Model Training, and Resource Allocation," *IEEE Internet of Things Journal*, early access.

- [3] T.-H. Vu, **Q.-V. Pham**, D. B. da Costa, and S. Kim, "[Rate-Splitting Multiple Access-assisted THz-based Short-Packet Communications](#)," *IEEE Wireless Communications Letters*, early access.
- [4] A. K. Bashir, N. Victor, S. Bhattacharya, T. Huynh-The, R. Chengoden, G. Yenduri, P. P. R. Maddikunta, **Q.-V. Pham**, T. R. Gadekallu, and M. Liyanage, "[Federated Learning for the Healthcare Metaverse: Concepts, Applications, Challenges and Future Directions](#)," *IEEE Internet of Things Journal*, early access.
- [5] S. Pakravan, J.-Y. Chouinard, X. Li, M. Zeng, W. Hao, **Q.-V. Pham**, and O. A. Dobre, "[Physical Layer Security for NOMA Systems: Requirements, Issues, and Recommendations](#)," *IEEE Internet of Things Journal*, early access.
- [6] T.-H. Vu, T.-V. Nguyen, **Q.-V. Pham**, D. B. da Costa, and S. Kim, "[STAR-RIS Enabled Short-Packet NOMA Systems](#)," *IEEE Transactions on Vehicular Technology*, early access.
- [7] M.-D. Nguyen, S.-M. Lee, **Q.-V. Pham**, H. T. Dinh, D. N. Nguyen, and W.-J. Hwang, "[HCFL: A High Compression Approach for Communication-Efficient Federated Learning in Very Large Scale IoT Networks](#)," *IEEE Transactions on Mobile Computing*, vol. 22, no. 11, pp. 6495-6507, Nov. 2023.
- [8] X. Zhu, H. Wang, Z. Yang, and **Q.-V. Pham**, "[Time-Division Based Integrated Sensing, Communication, and Computing in Integrated Satellite-Terrestrial Networks](#)," *Digital Signal Processing*, vol. 143, pp. 104262, Nov. 2023.
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LANGUAGES

VIETNAMESE: Mother-tongue
 ENGLISH: Fluent
 KOREAN: Basic Knowledge